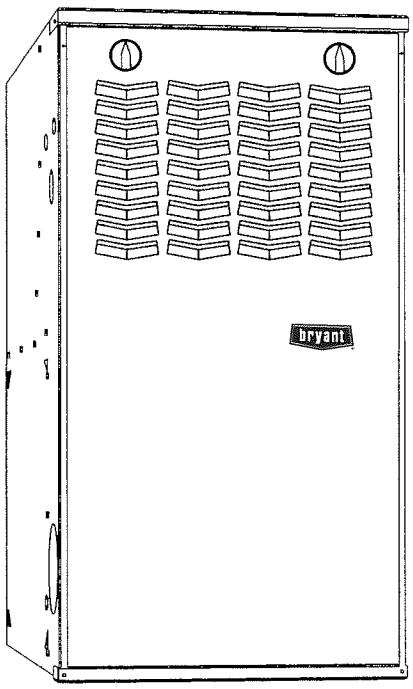
Induced Combustion Gas Furnace

bryant®

Owner's Manual

NOTE TO INSTALLER:
THIS MANUAL MUST BE LEFT WITH THE EQUIPMENT USER.

USER: Please read all instructions in the manual and retain all manuals for future reference.



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ISO 9001:2000

Always Ask For FACTORY AUTHORIZED PARTS

AHRI CERTIFIED™ www.ahridirectory.org

Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.

⚠ WARNING

FIRE OR EXPLOSION HAZARD

Failure to follow safety warnings could result in injury, death, or property damage.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS
- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Leave the building immediately.
- Immediately call your gas supplier from a near by phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

⚠ WARNING

CARBON MONOXIDE POISONING HAZARD

Failure to follow this warning could result in personal injury and/or death.

Carbon Monoxide is invisible, odorless, and toxic! Bryant Heating and Cooling Systems recommends a carbon monoxide alarm in your home, even if you do not own a gas appliance. Locate the carbon monoxide alarm in the living area of your home and away from gas appliances and doorways to attached garages. Follow the alarm manufacturer's instruction included with the alarm.

⚠ WARNING

ELECTRICAL OPERATION HAZARD

Failure to follow this warning could result in personal injury, death, or property damage.

Do not use this furnace if any part has been under water. A flood-damaged furnace is extremely dangerous. Attempts to use the furnace can result in fire or explosion. A qualified service agency should be contacted to inspect the furnace and to replace all gas controls, control system parts, electrical parts that have been wet or the furnace if deemed necessary.

WELCOME TO TODAY'S GENERATION OF COMFORT

Congratulations! Your new, higher efficiency gas furnace is a sound investment which will reward you and your family with years of warm memories winter after winter.

Not only is your new furnace energy efficient, it is also extremely reliable. Spend just a few minutes with this booklet to learn about the operation of your new furnace—and the small amount of maintenance it takes to keep it operating at peak efficiency. Years went into the development of your new furnace. Take a little time now to assure its most efficient operation for years to come.

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GENERAL FURNACE SAFETY

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FURNACE COMPONENTS

(Furnace shown in upflow position; may be used in downflow or horizontal orientation or applications. Vent Elbow may be turned to a different position, depending on type of installation)

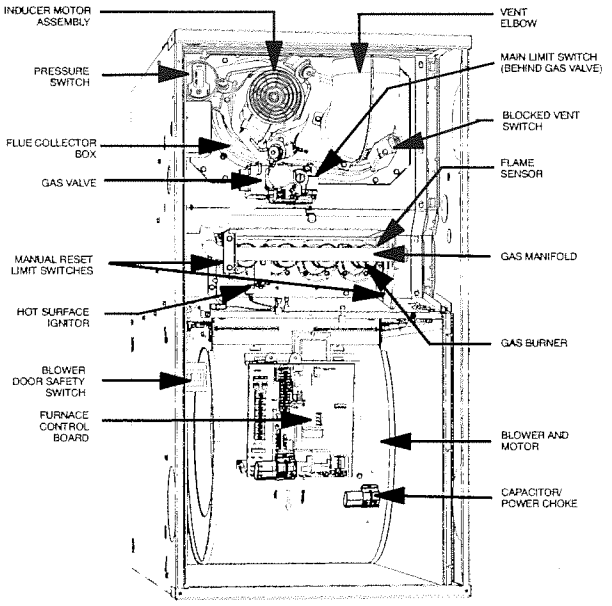

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Fig. 1 - 80% AFUE Single Stage Furnace Components

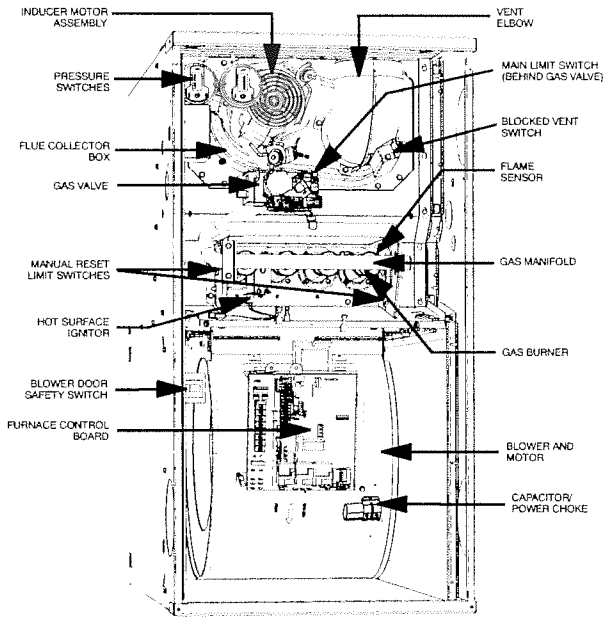

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Fig. 2 - 80% AFUE Two-Stage Furnace Components

IMPORTANT FACTS (DO'S AND DON'TS)

- DO: READ AND UNDERSTAND THIS MANUAL.
- DO: Have your furnace and vent system inspected annually by a qualified service technician.
- DO: Inspect your filter monthly and clean or replace when needed.
- DO: Provide adequate airflow to the furnace for efficient combustion and safe ventilation.
- DO: Keep your furnace free and clear of insulating material. Some materials may be combustible. Examine the furnace area when the furnace is installed or when insulation is added.
- DO NOT: Enclose your furnace in an airtight room or seal it behind solid doors.
- DO NOT: Keep combustible materials, gasoline, and other flammable liquids or vapors around your furnace.
- DO NOT: Cover your furnace in any manner.
- DO NOT: Store anything (including trash or debris) near your furnace.
- DO NOT: In any way block or restrict airflow around your furnace.
- DO NOT: In any way block or restrict airflow to your supply air and return air grills.
- DO NOT: Use your furnace room as a broom closet or a place to store any kind of chemical or cleaner.
- DO NOT: Contaminate the air used for combustion of your furnace with any kind of chemical or fumes. This could also cause heat exchangers, metal vent systems or components to deteriorate.

NOTE: These chemicals or fumes are present in many products around the home, such as: water softener salts, any type of household cleaning product, any type of laundry product, adhesives, paints, varnishes, paint strippers, waxes and plastics, etc.

During remodeling be sure the combustion air is fresh and uncontaminated. If these compounds are burned in your furnace, the heat exchangers and metal vent system may deteriorate.

NOTE: The qualified installer or agency must use only factory-authorized replacement parts, kits, and accessories when modifying this product.

This furnace contains safety devices which must be manually reset. If the furnace is left unattended for an extended period of time, have it checked periodically for proper operation. This precaution will prevent problems associated with no heat, such as frozen water pipes, etc. See "Before You Request a Service Call" section in this manual.

⚠ WARNING

FIRE OR EXPLOSION HAZARD

Failure to follow this safety warning could result in injury, death, or property damage.

Do not keep combustible materials, gasoline, and other flammable liquids or vapors around your furnace.

⚠ WARNING

FIRE OR EXPLOSION HAZARD

Failure to follow safety warnings could result in personal injury, death, or property damage.

Keep insulation clear of furnace and maintain clearances shown on unit clearance label.

BEFORE STARTING YOUR FURNACE

Examine the furnace installation to determine that:

1. All flue gas carrying areas external to the furnace (i.e. chimney, vent connector) are clear and free of obstructions.
2. The vent connector is in place, slopes upward and is physically sound without holes or excessive corrosion.
3. The return-air duct connection(s) is physically sound, is sealed to the furnace casing, and terminates outside the space containing the furnace.
4. The physical support of the furnace is sound without sagging cracks, gaps, etc. around the base.
5. There are no obvious signs of deterioration of the furnace.

SAFETY CONSIDERATIONS

Installing and servicing heating equipment can be hazardous due to gas and electrical components. Only trained and qualified personnel should install, repair, or service heating equipment.

Untrained personnel can perform basic maintenance functions such as cleaning or replacing air filters. All other operations must be performed by trained service personnel. Observe safety precautions in this manual, on tags, and on labels attached to the furnace, and other safety precautions that may apply.

Recognize safety information. This is the safety-alert symbol ⚠. When you see this symbol on the furnace and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which will result in severe personal injury or death. WARNING signifies hazards which could result in personal injury or death. CAUTION is used to identify unsafe practices which would result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which will result in enhanced installation, reliability or operation.

STARTING YOUR FURNACE

Your furnace uses an automatic, hot surface ignition system to light the burners each time the thermostat signals the furnace to start.

Follow these important safeguards:

- Never attempt to manually light the burners with a match or other source of flame.

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Fig. 3 - Do Not Light Burner with Match

- Read and follow the operating instructions on inside of main furnace door, especially the item that reads as follows:
  "Wait 5 minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, **STOP!** Follow "B" in the safety information above on this furnace label. If you don't smell gas, go to the next step."
- If a suspected malfunction occurs with your gas control system, such as the burners do not light when they should, refer to the shutdown procedures on inside of main furnace door, or in the "Shutting Down Your Furnace" section and call your dealer as soon as possible.

⚠ WARNING

FIRE AND EXPLOSION HAZARD

Failure to follow this warning could result in personal injury, death or property damage.

Should the gas supply fail to shut off or if overheating occurs, turn off the manual gas valve to the furnace BEFORE turning off the electrical supply and install lockout tag.

- **CHECK AIR FILTER:** Before attempting to start your furnace, be sure the furnace filter is clean and in place. See "Performing Routine Maintenance" section in this manual. Do not run the furnace without a filter in place. Then proceed as follows:

STEPS FOR STARTING YOUR FURNACE

1. Set your room thermostat to the lowest temperature setting.

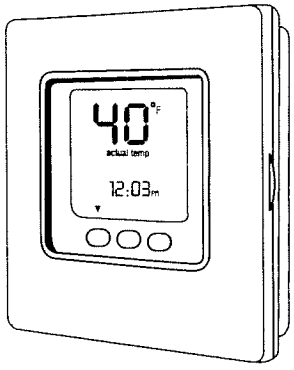

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Fig. 4 - Lowest Temperature Setting

2. Close the external manual gas valve.

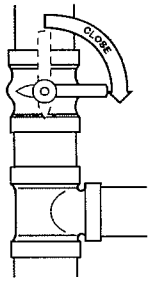

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Fig. 5 - Close Valve

3. Turn OFF electrical supply to the furnace.

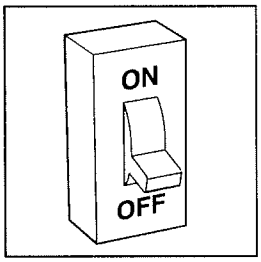

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Fig. 6 - Turn Off Electrical Supply

4. Remove the outer door.

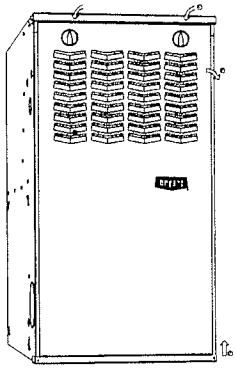

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Fig. 7 - Remove Furnace Door

5. Turn the control switch on the gas control to the OFF position and wait 5 minutes. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" on furnace label. If you don't smell gas, go to next step.

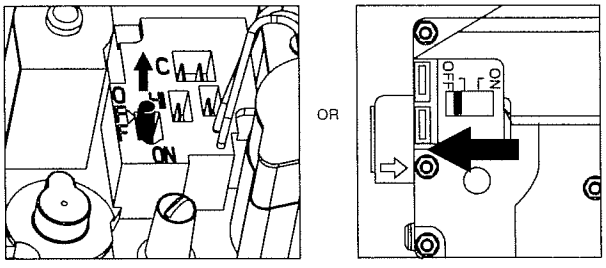

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Fig. 8 - Control Switch to OFF

6. After waiting 5 minutes, if you still smell gas, STOP! Follow the safety information on the cover of this manual. If you do not smell gas, go to the next step.
7. Turn the control switch to ON.

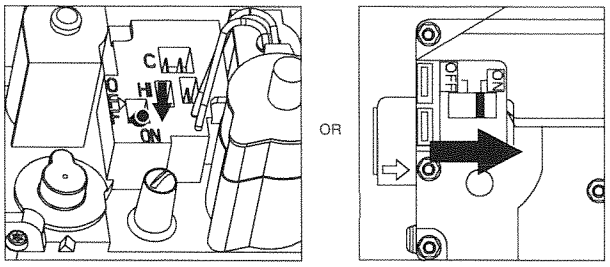

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Fig. 9 - Control Switch to ON

8. Replace the outer door.

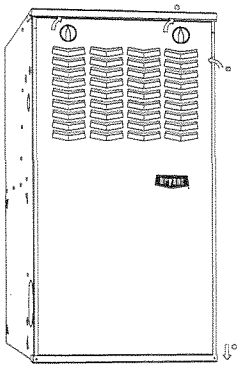

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Fig. 10 - Furnace Door Replaced

9. Turn ON the electrical supply to the furnace.

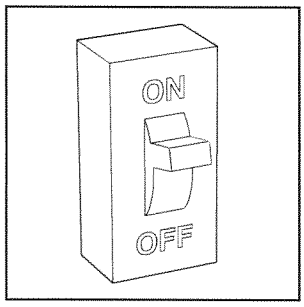

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Fig. 11 - Turn On Electrical Supply

10. Open the external manual gas valve.

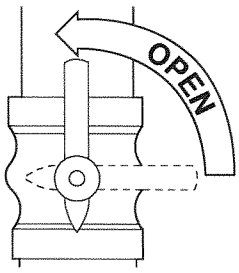

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Fig. 12 - Open Valve

11. Set the room thermostat to a temperature slightly above the room temperature. This will automatically signal the furnace to start. The inducer motor will start and the hot surface igniter will energize. When hot, the igniter will have an orange glow.
12. After about 17 seconds, the gas valve permits gas to flow to the main burners where it is ignited. Hot flames begin to warm the furnace's heat exchanger. After a time delay of approximately 25-45 seconds the furnace blower is switched on.

NOTE: If the main burners fail to ignite, the furnace control system will go through three more ignition cycles. Then if burners fail to ignite, the system will lockout. If lockout occurs or the blower does not come on, shut down your furnace and call your dealer for service.

13. Set your thermostat to the temperature that satisfies your comfort requirements. SUGGESTION: Setting the thermostat back a few degrees—and compensating for the difference with warmer clothing—can make a big difference in your fuel consumption on extremely cold days. The few degrees at the top of your thermostat "comfort level" are the most costly degrees to obtain.

When the room temperature drops below the temperature selected on the thermostat, the furnace will switch on automatically. When the room temperature reaches the setting selected on the thermostat, the furnace will be automatically switched off.

Continuous Fan Operation -Some thermostats have a "FAN" switch with 2 selections: AUTO and ON. When thermostat is set on AUTO, the furnace blower cycles on and off, controlled by the thermostat. In ON position, the furnace blower runs continuously except for a 42-62 sec delay at the "call for heat." Continuous fan keeps the temperature level in your home more evenly balanced. It also continuously filters the indoor air.

Comfort Fan™ -On all **but** the 310AAV or 310JAV, the continuous fan blower speed can be increased or decreased if desired due to change of seasons, large gatherings in your home, etc. Simply change your "FAN" switch from "on" to "off" (or "auto" depending on your thermostat), and then return to "on", within 1 to 3 seconds. The blower will switch to the next highest speed. There are at least 3 speeds to choose from. If the blower is running on its highest speed, a request to change will direct the blower to return to its lowest speed.

SHUTTING DOWN YOUR FURNACE

Should you ever suspect a malfunction in your furnace, you will need to turn the furnace off. The following procedures must be followed:

1. Set your room thermostat to the lowest temperature setting. (See Fig. 3.)
2. Close the external manual gas valve (See Fig. 4).
3. Turn off electrical supply to the furnace. (See Fig. 5.)
4. Remove outer furnace door. (See Fig. 6.)
5. Turn the switch on the gas control to the OFF position. (See Fig. 7.)
6. Replace the outer furnace door. (See Fig. 9.)
7. If the furnace is being shut down because of a malfunction, call your dealer as soon as possible.

NOTE TO EQUIPMENT OWNER:

For your convenience, please record the model and serial numbers of your new equipment in the spaces provided. This information, along with the installation data and dealer contact information will be helpful should your system require maintenance or service.

FURNACE

Model # _____

Serial # _____

AIR CONDITIONER OR HEAT PUMP

Model # _____

Serial # _____

INDOOR COIL (Furnace Coil or Fan Coil)

Model # _____

Serial # _____

INSTALLATION INFORMATION:

Date Installed _____

DEALERSHIP CONTACT INFORMATION:

Company Name _____

Address _____

_____

Phone Number _____

Technician Name _____

_____

_____

NOTE TO INSTALLER:

This manual must be left with the equipment owner.

bryant®

Heating & Cooling Systems

TO OBTAIN INFORMATION ON PARTS: Consult your installing dealer or classified section of your local telephone directory under the "Heating Equipment" or "Air Conditioning Contractors & Systems" heading for dealer listing by brand name.

Have available the Model No., Series Letter, & Serial No. of your equipment to ensure correct replacement part.

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Replaces: OM05–55

Manufacturer reserves the right to change, at any time, specifications and designs without notice and without obligations.

Bryant Heating & Cooling Systems

Limited Warranty for Non-Condensing Gas Furnace

FOR WARRANTY SERVICE OR REPAIR:

Contact the installer or a Bryant dealer. You may be able to find the installer's name on the equipment or in your Owner's Packet. You can also find a Bryant dealer online at www.bryant.com

For help, contact: Bryant Heating & Cooling Systems, Consumer Relations, P.O. Box 4808, Syracuse, New York 13221 Phone 1-800-428-4326

PRODUCT REGISTRATION: You can register your product online at www.bryant.com .

Model Number_____ Serial Number _____

Date of Installation _____ Installed by _____

Name of Owner _____ Address of Installation _____

Bryant Heating & Cooling Systems (hereinafter "Company") warrants this product against failure due to defect in materials or workmanship under normal use and maintenance as follows. All warranty periods begin on the date of original installation. If a part fails due to defect during the applicable warranty period Company will provide a new or remanufactured part, at Company's option, to replace the failed defective part at no charge for the part. Alternatively, and at its option, the Company will provide a credit in the amount of the then factory selling price for a new equivalent part toward the retail purchase price of a new Company product. Except as otherwise stated herein, those are Company's exclusive obligations under this warranty for a product failure. This limited warranty is subject to all provisions, conditions, limitations and exclusions listed below and on the reverse (if any) of this document.

RESIDENTIAL APPLICATIONS
This warranty is to the original purchasing owner and subsequent owners only to the extent and as stated in the Warranty Conditions and below. The limited warranty period in years, depending on the part and the claimant, is as shown in the table below.

		Limited Warranty (Years)	
Product	Item	Original Owner	Subsequent Owners
Non-Condensing Gas Furnace	Parts	10* (or 5)	5
	Heat Exchanger	20	20

* If properly registered within 90 days of original installation, otherwise 5 years (except in California and Quebec and other jurisdictions that prohibit warranty benefits conditioned on registration). See Warranty Conditions below.

OTHER APPLICATIONS
The warranty period is twenty (20) years on the heat exchanger, and one (1) year on all other parts. The warranty is to the original owner only and is not available for subsequent owners.

LEGAL REMEDIES: The owner **must** notify the Company in writing, by certified or registered letter to Bryant Heating & Cooling Systems, Warranty Claims, P.O. Box 4808, Syracuse, New York 13221, of any defect or complaint with the product, stating the defect or complaint and a specific request for repair, replacement, or other correction of the product under warranty, mailed at least thirty (30) days before pursuing any legal rights or remedies.

Bryant Heating & Cooling Systems

WARRANTY CONDITIONS:

1. To obtain the longer warranty period as shown in the table under original owner, the product must be properly registered at *www.bryant.com* within ninety (90) days of original installation. In jurisdictions where warranty benefits conditioned on registration are prohibited by law, registration is not required and the longer warranty period shown will apply.
2. Where a product is installed in a newly constructed home, the date of installation is the date the homeowner purchased the home from the builder.
3. If the date of original installation cannot be verified, then the warranty period begins ninety (90) days from the date of product manufacture (as indicated by the model and serial number). Proof of purchase may be required at time of service.
4. The limited parts warranty periods as shown in the table under subsequent owners do not require registration.
5. Product must be installed properly and by a licensed HVAC technician.
6. The warranty applies only to products remaining in their original installation location.
7. Installation, use, care, and maintenance must be normal and in accordance with instructions contained in the Installation Instructions, Owner's Manual and Company's service information.
8. Defective parts must be returned to the distributor through a registered servicing dealer for credit.

LIMITATIONS OF WARRANTIES: **ALL IMPLIED WARRANTIES AND/OR CONDITIONS (INCLUDING IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE OR PURPOSE) ARE LIMITED TO THE DURATION OF THIS LIMITED WARRANTY. SOME STATES OR PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY OR CONDITION LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESS WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON, WHATSOEVER.**

THIS WARRANTY DOES NOT COVER:

1. Labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts, or replacement parts, or new units.
2. Any product not installed pursuant to applicable regional efficiency standards issued by the Department of Energy.
3. Any product purchased over the Internet.
4. Normal maintenance as outlined in the installation and servicing instructions or Owner's Manual, including filter cleaning and/or replacement and lubrication.
5. Failure, damage or repairs due to faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
6. Failure to start or damages due to voltage conditions, blown fuses, open circuit breakers, or the inadequacy, unavailability, or interruption of electrical, Internet service provider, or mobile device carrier service or your home network.
7. Failure or damage due to floods, winds, fires, lightning, accidents, corrosive environments (rust, etc) or other conditions beyond the control of Company.
8. Parts not supplied or designated by Company, or damages resulting from their use.
9. Products installed outside the U.S.A. or Canada.
10. Electricity or fuel costs, or increases in electricity or fuel costs from any reason whatsoever, including additional or unusual use of supplemental electric heat.
11. Any cost to replace, refill or dispose of refrigerant, including the cost of refrigerant.
12. **ANY SPECIAL, INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER.** Some states or provinces do not allow the exclusion of incidental or consequential damages, so the above limitation may not apply to you.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state or province to province.